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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/776,664

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Shrinivas Ashwin

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EXAMINER

ROSE, HELENE ROBERTA

ART UNIT

PAPER NUMBER

2163

DATE MAILED: 07/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/776,664	ASHWIN ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Helene Rose	2163	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 02/10/2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-30 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-30 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 02/10/2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |                                                                                                    |                                                                             |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____                                                |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>6/17/05&amp;9/9/05</u> .                                                  | 6) <input type="checkbox"/> Other: _____                                    |

### Detailed Action

1. Claims 1-30 have been presented for examination.
2. Claims 1-30 have been rejected.

### Information Disclosure Statement

3. The information disclosure statement (IDS) submitted on June 17, 2005 and September 09, 2005, accordingly, the information disclosure statement is being considered by the examiner.

### Claim Rejections – 35 U.S.C – 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:  
  
The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
5. Claims 5, 15 and 25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
6. Claims 5, 15 and 25 recite “(or their equivalents)”, in which this limitation renders the entire claims vague and/or indefinite. It is unclear whether the cited limitation is to be included or a separate. It’s unclear for what is meant by the following enclosed limitation. Therefore, the examiner cannot interpret the claims without knowing what the term “(or their equivalents)” constitutes.
7. Claims 5, 15 and 25, recite the following limitation “ntext”, this limitation renders the claim vague/and or indefinite because its unclear what is meant by the

following limitation. Therefore the examiner interprets the claim language with the broadest reasonable interpretation as herein.

8. Claims 6,16 and 26 recite “(or an equivalent data type)”, in which this limitation renders the entire claims vague and/or indefinite. It is unclear whether the cited limitation is to be included or a separate. It’s unclear for what is meant by the following enclosed limitation. Therefore, the examiner cannot interpret the claims without knowing what the term “(or an equivalent data type)” constitutes.

9. Claims 6,16 and 26 are rejected under 112, second paragraph. Claims 6, 16 and 26 recite the following limitation “or”, this limitation renders the claim vague and indefinite, because the term “or” is considered to be alternative language. Therefore, the limitation renders the claim vague and indefinite, because it is unclear as to how the examiner should interpret the claim limitation as it relates to “or”.

#### Claim Rejections – 35 U.S.C 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1, 5-7, 11,15-17, 21 and 25-27 are rejected under 35 U.S.C. 102(b) as being anticipated by Becker (US Patent No, 6,301,579/Date of Patent: October 9, 2001).

Claims 1, 11 and 21:

Regarding Claims 1, 11 and 21 discloses a method, computer-readable medium, and a system utilizing the same functionality, wherein Becker teaches a method, computer-readable medium and a system for handling a large data object in a computer system, said method comprising creating a handling structure representing the large data object (column 10, lines 29-35, wherein to create a data file, a user starts a data set, the data set can often times contain an extremely large amount of raw data, Becker) wherein said handling structure can be processed by said computer system (column 8, lines 42-43, wherein computer system shown in Figure 20, Becker), via functions (column 19, lines 59-61, wherein control bar has several pull down menus that access the decision table classifier visualizer tool functions, Becker), operations (column 7, lines 48-51, wherein numerical values can also be assigned to each categorical attribute value for sorting and other operations, i.e. red, can be set to 1, blue can be set to 2, and orange can be set to 3, Becker), and so forth available for a small data object, with which said large data object could not be so processed (Figure 19, all features further defined in column 30, lines 22-41, Becker).

Claims 5, 15 and 25:

Regarding Claims 5, 15 and 25, Becker teaches wherein a data object having a type from among the group of types comprising text, ntext, and image data types is converted into a large data object with a corresponding handling structure (column 7, lines 44-45, wherein categorical attributes have nominal values like text strings, column 7, lines 13-17, wherein using on-line analytical processing, OLAP, a relational

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data set can be converted into a summarized hypercube data structure in order to perform fast queries, column 19, lines 63-64, wherein print an image of the current display, Becker).

Claims 6,16 and 26:

Regarding Claims 6, 16 and 26, Becker teaches wherein a data object of type text, ntext, or image data type is converted into a data object of type varchar (MAX), nvarchar (MAX), or varbinary (MAX) respectively wherein varchar (MAX), nvarchar (MAX), and varbinary (MAX) comprise a handling structure and the MAX corresponds to a predetermined maximum size value (Figure 19, all features, Becker).

Claims 7,17 and 27:

Regarding Claims 7, 17 and 27, Becker teaches wherein said handling structure corresponds to a small value data object (column 14, lines 45-54, Becker), and said small value data object is stored entirely within the said handling structure (see abstract, wherein a data file based on a data set relational data is stored as a relational table, where each row represents an aggregate of all the records for each combination of values of the attribute used, columns 11-12, lines 64-67 and lines 1-10, Becker).

**Claim Rejections – 35 U.S.C – 103**

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains.

Patentability shall not be negated by the manner in which the invention was made.

13. Claims 2-4, 8-9, 12-14, 18-20, 22-24 and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Becker (US Patent No. 6,301,579, Date of Patent: October 9, 2001) in view of Bruso et al. (US Patent No. 6,615,219, Filing Date of Patent: December 29, 1999).

Claims 2, 12 and 22:

Becker discloses all the limitation above. However, Becker does not disclose a first handling structure pointing to a first large data object is virtually copied by the creation of a second handling structure that points to the same first large data object provided that the first handling structure and the second handling structure do not write a change to said first large data object. On the other hand, Bruso discloses a first handling structure pointing to a first large data object is virtually copied by the creation of a second handling structure that points to the same first large data object provided that the first handling structure (Figures 2 and 3, all features further defined in column 3, lines 5-45, Bruso) and the second handling structure do not write a change to said first large data object (Figure 7, diagram 414, wherein update page allocation information, yes or no, Bruso). It would have been obvious at the time of the invention was made for one person of the ordinary skill in the art to modify the disclosure of Becker to provide faster processors, additional bandwidth, and more storage for applications.

Claims 3, 13 and 23:

Regarding Claims 3, 13 and 23, Becker in view of Bruso teaches wherein, if said first handling structure must write a change to said first large data object (column 30,



lines 3-10, wherein user can change the following options shown in option panel, and maximum size used is confronted with a very large dataset, Becker), said first large data object is copied to a second large data object (column 6, lines 15-19, Bruso) and said second handling structure is pointed to said second large data object prior to the first handling structure writing the change to the first large data object (column 6, lines 24-39, Bruso).

Claims 4, 14 and 24:

Regarding Claims 4, 14 and 24, teaches wherein, if said second handling structure must write a change to said first large data object (Figure 7, diagrams 416 and 418, Bruso), said first large data object is copied to a second large data object (Figure 8, diagram 458, Bruso) and said second handling structure is pointed to said second large data object (Figure 3, all features, wherein further defined in columns 66-67 and lines 1-10, Bruso), and then said second handling structure will write the change to the second large data object (Figure 8, diagram 462, Bruso).

Claims 8, 18 and 28:

Regarding Claims 8, 18 and 28, Bruso teaches a delete operation for said handling structure (column 4, lines 41-48, Bruso), wherein if said handling structure is of a first type, said handling structure and a corresponding large data object are both deleted (column 5, lines 43-49, Bruso), and wherein if said handling structure is of a second type, only said handling structure, and not said corresponding large data object, is deleted (column 4, lines 41-48, Bruso).



Claims 9, 19 and 29:

Regarding Claims 9, 19 and 29, Becker in view of Bruso teaches wherein said handling structure has a lifetime (column 4, lines 29-35, Bruso), and said handling structure comprising a field having a value corresponding to said lifetime (column 4, lines 38-40, Bruso).

Claims 10, 20 and 30:

Regarding Claims 10, 20 and 30, Becker in view of Bruso teaches wherein said handling structure is created (column 4, lines 29-35, Bruso) by a handling structure factory in response to a need for a handling structure (column 1, lines 46-50, Bruso).

**Prior Art Made of Record**

1. Becker (US Patent No. 6,301,579) discloses a data structure visualizes a data structure such as a decision table classifier; wherein a data file is based on a data set of relational data is stored as a relational table, where each row represents an aggregate of all the records for each combination of values of the attributes used.
2. Bruso et al. (US Patent No. 6,615,219) discloses a system and method for managing binary large object in a database.
3. Trappen et al. (US Patent No. 7,010,542) discloses a select list for the query is thus constructed such that it produces a result set having a predefined structure, wherein columns representing identifier properties of an entity are added to the select list.

4. Srivastava (US Patent No. 6,735,598) discloses techniques used in a relational database system for defining subclasses of built in classes and thereby achieving columns in database tables, which contain polymorphic objects of the built in classes

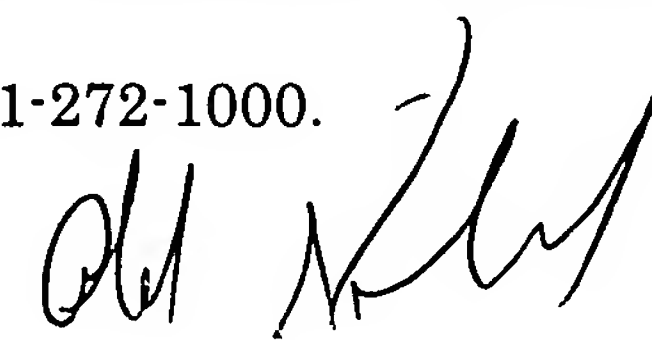
#### Point of Contact

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Helene Rose whose telephone number is (571) 272-0749. The examiner can normally be reached on 8:00am - 4:30pm Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on (571) 272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Technology Center 2100  
July 6, 2006



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